




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

MAY 10 2010

MEMORANDUM

Subject: EPA Handbook - *Section 401 Water Quality Certification: A Clean Water Act Water Quality Protection Tool for States and Tribes*

FROM: Denise Keehner   
Director, Office of Wetlands, Oceans, and Watersheds  
U.S. Environmental Protection Agency

TO: Appalachian State Water Quality Certification Programs

I am pleased to provide, for your information, an updated version of the Environmental Protection Agency's (EPA) Clean Water Act (CWA) Section 401 Water Quality Handbook being made available to states and tribes nationwide. EPA recognizes that states and tribes have an important responsibility under CWA §401 to help ensure the protection of the Nation's aquatic resources and EPA considers the effective functioning of the §401 Certification Program to be essential to the protection and restoration of waters. The new handbook, "Section 401 Water Quality Certification: A Clean Water Act Water Quality Protection Tool for States and Tribes",<sup>1</sup> describes CWA §401 certification authorities, the way different state and tribal programs use certification and how state and tribal certification programs obtain the resources necessary to operate. It incorporates state and tribal experiences and legal history and we hope provides a helpful technical resource for §401 certification programs. While this new handbook does not create any requirements or establish new policy, EPA is emphasizing the importance of §401 certification to ensure that water quality impacts associated with federal permits, including §404 permits authorizing discharges from surface coal mining activities, are minimized and that CWA requirements are met.

Consistent with two decades of case law and reflecting extensive state and tribal program experience, EPA has updated its handbook on CWA §401 water quality certification. EPA is taking the opportunity provided by the publication of this long-awaited updated handbook on water quality certification to stress the key role that states and tribes play in protecting water quality through this program and process, and highlight good practices specifically relating to surface coal mining in Appalachia.

<sup>1</sup> Found at <http://www.epa.gov/owow/wetlands/waterquality/>



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On June 11, 2009, EPA signed a Memorandum of Understanding (MOU) with the Department of the Interior (DOI) and the Department of the Army to address the harmful environmental consequences of Appalachian surface coal mining operations and to help to ensure that future mining is consistent with federal law.<sup>2</sup> Under the MOU, EPA agreed to both short- and long-term actions. In the short term, EPA agreed to take appropriate steps to assist the states to strengthen state regulation, enforcement, and permitting of Appalachian surface mining operations using their authorities under CWA §402 to issue water pollution discharge permits and under CWA §401 to issue state water quality certifications for federal permits. This handbook and memorandum are helping to fulfill EPA's commitment to improve and strengthen §401 water quality certifications of surface mining operations. The following discussion does not establish any new requirements, but does emphasize the importance of an effective §401 certification program in addressing adverse environmental impacts, including potential impacts from surface coal mining practices.

### Water Quality Certification of Federal Permits for Surface Coal Mining in Appalachia

The §401 water quality certification process is an important mechanism for states and tribes to use in order to help ensure that federally permitted projects, including projects for surface coal mining activities meet water quality-related requirements. This process ensures that states and tribes have the opportunity to establish conditions or deny certification in order to protect their water resources.

States and tribes make their decisions to deny, certify, or condition federal permits or licenses primarily by ensuring the proposed activity will comply with state or tribal water quality standards. In doing so, states and tribes consider whether the activity will cause or contribute to violations of effluent limitations, new source performance standards, limitations on toxic pollutants, and other water resource requirements of state or tribal law. Granting §401 certification represents a determination by the state or tribe that a permit is consistent with CWA requirements, EPA-approved water quality standards, and any applicable provisions of state or tribal laws.<sup>3</sup>

EPA has observed that state certifications of federal §404 permit actions for surface coal mines in Appalachia frequently lack conditions designed to protect the narrative criteria found in state water quality standards. EPA's recent Permit Quality Review of §402 permits in four Appalachian states (Kentucky, Ohio, Tennessee, and West Virginia) identified similar concerns that states may not be incorporating National Pollutant Discharge Elimination System (NPDES) permit limits that are protective of narrative water quality criteria. As states evaluate these issues within their §401 certification authorities, EPA Regional NPDES and water quality standards program staff can serve as a source of technical support for interpreting narrative criteria, developing permit-specific effluent limitations, and identifying appropriate control technologies.

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<sup>2</sup> See: <http://www.epa.gov/owow/wetlands/guidance/mining.html>.

<sup>3</sup> "Any certification provided under this section [§401] shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant for a Federal license or permit will comply with [enumerated provisions of the CWA]... and with any other appropriate requirement of State law set forth in such certification." 33 USC 1341(d); CWA §401(d).

## Monitoring

When certifying permits, including those related to surface coal mining, states or tribes may include conditions such as monitoring and reporting provisions if a state or tribe believes them necessary to comply with the CWA, federally-approved water quality standards, or appropriate requirements of state or tribal law. Several states have included monitoring and reporting requirements as §401 conditions. Such conditions help to ensure that if water quality is degraded, the permittee will take appropriate remedial action. Monitoring and reporting requirements also allow agencies to confirm that certification conditions intended to protect water quality are effective and being implemented. And if such conditions are not effective, such requirements can help trigger adaptive management practices at the site. Monitoring and reporting can also help inform the development of more robust certification conditions in the future. As an added benefit, monitoring and reporting helps permittees see and understand the impact or avert an impact on water quality resulting from their permitted actions.

With regard to mining activities, monitoring requirements often vary among state programs and projects based on factors such as potential mine-influenced water constituents of concern, existing and downstream water quality, and the size and scope of proposed impacts. In order to identify and potentially resolve water quality issues before significant impairments occur, monitoring requirements should generally identify specific protocols and sampling regimes that commence before initial land clearing and continue throughout operation of the mine to a set post-construction timeframe. This type of continuous dataset will provide the baseline site conditions and regular monitoring records necessary to help identify and address potential declining water quality trends before they become significant water quality impairments. In the context of surface mining in Appalachia, there are known water quality concerns for Total Dissolved Solids (TDS), conductivity, selenium, and sulfates, among other constituents. Biological monitoring is also often used as a measure of whether a water body meets aquatic life-based standards, and can also be used in the certification context to help ensure that chronic and synergistic effects of overall changes in water chemistry are being captured and addressed. Biological monitoring is most helpful when it is conducted both prior to and after permitted activities, including monitoring of waters at the point of discharge and downstream to assess any changes in water quality and the aquatic community parameters.

## Adaptive Management

Some state and tribal water quality certifications include conditions requiring adaptive management and/or reopener clauses for larger projects with longer time horizons, such as Federal Energy Regulatory Commission licenses that last several decades. Adaptive management plans clearly specified in certification conditions could, based on monitoring results, require the applicant to implement a predetermined progression of increasingly stringent Best Management Practices (BMPs) to control sources of pollution on site. Similarly, a state certification could include a reopener clause as a permit condition requiring the permittee to work with the state to identify appropriate BMPs or other measures when monitoring or other

data indicate certain water quality conditions exist. States can use adaptive management or reopener clauses to trigger a variety of measures, such as new source control actions, new effluent treatment measures, and additional actions in the local watershed that would minimize or eliminate the negative effect on water quality. Additional actions in the local watershed could take many forms including cleaning up existing point or nonpoint sources of water quality degradation such as restoration of old highwalls, removing spoil or refuse piles, and eliminating discharges from abandoned mine lands. These measures would be designed in conjunction with a clear and detailed monitoring strategy with agreed-upon assessment, collection, and interpretation protocols to document existing conditions and water quality improvements associated with the proposed actions.

### Coordination Among Water Quality Programs

Surface coal mining in Appalachia is regulated under a number of federal and state statutes and by various state, tribal, and federal programs. Coordination among regulatory programs can provide opportunities for more efficient project reviews and also reduce the number of times an applicant has to submit information.

While each of these statutes and programs has its own priorities, some of the information collected for one program may also be required by or inform review by another program. For example, hydrology and water quality information submitted to the Surface Mining Control and Reclamation Act (SMCRA) program to assess the probable hydrologic consequences of a proposed project, and complete the "Cumulative Hydrologic Impacts Assessment," can also often be used by the NPDES permitting program, the CWA §401 water quality certification program, and the CWA §404 regulatory program to inform programmatic decisions. If the regulatory programs have the same baseline information at the same time, review by those programs of overall project impacts is likely to be more efficient, and unnecessary delays in the permitting process can be avoided.

Key partners of the §401 water quality certification program's review of permits for surface coal mines in Appalachia are the state water quality standards program office, the SMCRA permitting agency, the state NPDES permitting office, the Army Corps of Engineers District §404 permitting office, and EPA water quality programs. By pooling resources and sharing information states and tribes can conduct a more thorough review of proposed surface coal mining projects and strengthen the decision making process for both mining permit applications and §401 certifications of federal permits.

### Conclusion

Water quality certification under section 401 of the CWA is an important element in ensuring that federal permits meet CWA requirements and other appropriate requirements of state or tribal law. States and tribes have considerable authority under CWA §401, which makes it a valuable tool for addressing known as well as emerging water quality concerns. The new Handbook explains the fundamentals of §401 certification, highlights opportunities, and documents best practices that can be applied in many project contexts and geographic settings. With the release of the new Handbook and this memorandum EPA is emphasizing the

importance of §401 certification in Appalachian states as an element in the overall effort to more effectively address the water quality impacts of surface coal mining. EPA will also continue to support the Appalachian states with technical assistance and training. We hope this information is helpful to you.

EPA Headquarters contacts for §401 water quality certification are Donna Downing at 202-566-1367 [downing.donna@epa.gov](mailto:downing.donna@epa.gov) and Brian Topping at 202-566-5680 [topping.brian@epa.gov](mailto:topping.brian@epa.gov). We also encourage you to coordinate directly with your EPA Regional counterparts in Regions 3, 4, and 5.

Addressees:

Carl Campbell  
Kentucky Department for Natural Resources  
#2 Hudson Hollow  
Frankfort, KY 40601

Jennifer Thompson  
Kentucky Department for Natural Resources  
#2 Hudson Hollow  
Frankfort, KY 40601

Alan Grant, Supervisor  
DEP Division of Water, Water Quality Certification Section  
200 Fair Oaks Lane, Fourth Floor  
Frankfort, KY 40601

Sandy Gruzesky  
Director, Division of Water  
200 Fair Oaks Lane  
Frankfort, KY 40601

Paul E. Davis, Director  
Division of Water Pollution Control  
6th Floor, L & C Annex  
401 Church Street, Nashville, TN 37243

Randy Bournique, Manager,  
Ohio EPA, Division of Surface Water  
50 West Town Street, Suite 700  
P.O. Box 1049  
Columbus, Ohio 43216-1049

Ric Queen, Manager  
Ohio EPA Division of Surface Water  
P.O. Box 1049  
Columbus, Ohio 43216-1049

Scott Mandirola  
Environmental Resources Program Manager  
Department of Environmental Protection  
601 57th Street, S.E.  
Charleston, WV 25304

Tom Clarke  
Mining Director  
Department of Environmental Protection  
601 57th Street SE  
Charleston, WV 25304

Lyle Bennett  
Department of Environmental Protection  
601 57th Street, S.E.  
Charleston, WV 25304

Mike Terretti, Bureau Director  
Greensburg District Mining Office  
Armbrust Professional Center  
8205 Route 819, Box 603-C  
Greensburg, PA 15601

Glenn H. Rider, II, Director  
Watershed Management Bureau, PA DEP  
Rachel Carson State Office Building  
400 Market Street  
Harrisburg, PA 17101

Dave Davis, Director  
DEQ Office of Wetlands and Water Protection  
629 East Main Street  
Richmond, VA 23219

cc: Peter S. Silva, Assistant Administrator for Water  
Shawn Garvin, Regional Administrator, Region 3  
Stan Meiburg, Acting Regional Administrator, Region 4  
Susan Hedman, Regional Administrator, Region 5  
Jon Capacasa, Water Division Director, Region 3

**Jim Giattina, Water Division Director, Region 4**

**Tinka Hyde, Water Division Director, Region 5**